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**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

|                        |  |                       |
|------------------------|--|-----------------------|
| Attorney Docket No.    |  | 282.028               |
| First Inventor         |  | Jae Kwang Park et al. |
| Title                  | REMOVAL OF ARSENIC AND OTHER ANIONS USING NOVEL AD |                       |
| Express Mail Label No. |  | EV313040001US         |

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☒ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 24]  
(preferred arrangement set forth below)
  - Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 6]
5. Oath or Declaration [Total Pages 2]
  - a. ☒ Newly executed (original or copy)
  - b. ☐ Copy from a prior application (37 CFR 1.63 (d))  
(for continuation/divisional with Box 18 completed)
    - i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

**ADDRESS TO:** Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
  - a. ☐ Computer Readable Form (CRF)
  - b. Specification Sequence Listing on:
    - i. ☐ CD-ROM or CD-R (2 copies); or
    - ii. ☐ paper
  - c. ☐ Statements verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney  
(when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☒ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☐ Other: .....

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_ / \_\_\_\_\_

Prior application information:


Examiner: .....

Group Art Unit: .....

**For CONTINUATION OR DIVISIONAL APPS only:** The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**
☒ Customer Number or Bar Code Label 23,598 or ☐ Correspondence address below  
(Insert Customer No. or Attach bar code label here)

|         |           |          |  |
|---------|-----------|----------|--|
| Name    |           |          |  |
| Address |           |          |  |
| City    | State     | Zip Code |  |
| Country | Telephone | Fax      |  |

|                   |   |                                   |         |
|-------------------|---|-----------------------------------|---------|
| Name (Print/Type) | Mathew E. Corr  | Registration No. (Attorney/Agent) | 45,434  |
| Signature         |  | Date                              | 9/17/03 |

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

16800 U.S. PTO  
10/664300  
09/17/03

09/17/03  
17114 U.S. PTO

PTO/SB/17 (01-03)

Approved for use through 04/30/2003. OMB 0651-0032

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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# FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

☒ Applicant Claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 507.00)

## Complete if Known

Application Number  
Filing Date  
First Named Inventor Jae Kwang Park et al.  
Examiner Name  
Group Art Unit  
Attorney Docket No. 282.028

## METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☐ Deposit Account

Deposit Account Number 50-1170  
Deposit Account Name Boyle Fredrickson Newholm Stein & Gratz S.C.

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Credit any overpayments

☒ Charge any additional fee(s) during the pendency of this application

☐ Charge fee(s) indicated below, except for the filing fee

to the above-identified deposit account.

## FEE CALCULATION

### 1. BASIC FILING FEE

| Large Entity | Small Entity | Fee Code | Fee (\$) | Fee Description        | Fee Paid |
|--------------|--------------|----------|----------|------------------------|----------|
|              |              | 101      | 750      | Utility filing fee     | 375.00   |
|              |              | 106      | 330      | Design filing fee      |          |
|              |              | 107      | 520      | Plant filing fee       |          |
|              |              | 108      | 750      | Reissue filing fee     |          |
|              |              | 114      | 160      | Provisional filing fee |          |

SUBTOTAL (1) (\$ 375.00)

### 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

| Total Claims | Extra Claims | Fee from below | Fee Paid |
|--------------|--------------|----------------|----------|
| 30           | 10           | 9.00           | 90.00    |
| 4            | 1            | 42.00          | 42.00    |

Multiple Dependent

| Large Entity | Small Entity | Fee Code | Fee (\$) | Fee Description   |
|--------------|--------------|----------|----------|---|
|              |              | 103      | 18       | Claims in excess of 20                                    |
|              |              | 102      | 84       | Independent claims in excess of 3                         |
|              |              | 104      | 280      | Multiple dependent claim, if not paid                     |
|              |              | 109      | 84       | **Reissue independent claims over original patent         |
|              |              | 110      | 18       | **Reissue claims in excess of 20 and over original patent |

SUBTOTAL (2) (\$ 132.00)

\*\* or number previously paid, if greater; For Reissues, see above

## FEE CALCULATION (continued)

### 3. ADDITIONAL FEES

| Large Entity                      |          | Small Entity |          | Fee Description  | Fee Paid |
|-----------------------------------|----------|--------------|----------|--|----------|
| Fee Code                          | Fee (\$) | Fee Code     | Fee (\$) |  |          |
| 105                               | 130      | 205          | 65       | Surcharge – late filing fee or oath  |          |
| 127                               | 50       | 227          | 25       | Surcharge – late provisional filing fee or cover sheet                     |          |
| 139                               | 130      | 139          | 130      | Non-English specification  |          |
| 147                               | 2,520    | 147          | 2,520    | For filing a request for <i>ex parte</i> reexamination                     |          |
| 112                               | 920*     | 112          | 920*     | Requesting publication of SIR prior to Examiner action                     |          |
| 113                               | 1,840*   | 113          | 1,840*   | Requesting publication of SIR after Examiner action                        |          |
| 115                               | 110      | 215          | 55       | Extension for reply within first month                                     |          |
| 116                               | 410      | 216          | 205      | Extension for reply within second month                                    |          |
| 117                               | 930      | 217          | 465      | Extension for reply within third month                                     |          |
| 118                               | 1,450    | 218          | 725      | Extension for reply within fourth month                                    |          |
| 128                               | 1,970    | 228          | 985      | Extension for reply within fifth month                                     |          |
| 119                               | 320      | 219          | 160      | Notice of Appeal   |          |
| 120                               | 320      | 220          | 160      | Filing a brief in support of an appeal                                     |          |
| 121                               | 280      | 221          | 140      | Request for oral hearing   |          |
| 138                               | 1,510    | 138          | 1,510    | Petition to institute a public use proceeding                              |          |
| 140                               | 110      | 240          | 55       | Petition to revive – unavoidable   |          |
| 141                               | 1,300    | 241          | 650      | Petition to revive – unintentional   |          |
| 142                               | 1,300    | 242          | 650      | Utility issue fee (or reissue)   |          |
| 143                               | 470      | 243          | 235      | Design issue fee   |          |
| 144                               | 630      | 244          | 315      | Plant issue fee  |          |
| 122                               | 130      | 122          | 130      | Petitions to the Commissioner  |          |
| 123                               | 50       | 123          | 50       | Processing fee under 37 CFR 1.17(q)  |          |
| 126                               | 180      | 126          | 180      | Submission of Information Disclosure Stmt                                  |          |
| 581                               | 40       | 581          | 40       | Recording each patent assignment per property (times number of properties) |          |
| 146                               | 750      | 246          | 375      | Filing a submission after final rejection (37 CFR § 1.129(a))              |          |
| 149                               | 750      | 249          | 375      | For each additional invention to be examined (37 CFR § 1.129(b))           |          |
| 179                               | 750      | 279          | 375      | Request for Continued Examination (RCE)                                    |          |
| 169                               | 900      | 169          | 900      | Request for expedited examination of a design application                  |          |
| Other fee (specify)               |          |              |          |  |          |
| *Reduced by Basic Filing Fee Paid |          |              |          |  |          |
| SUBTOTAL (3)                      |          |              |          |  | (\$)     |

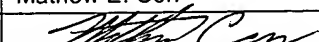
Other fee (specify)

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)

## SUBMITTED BY

Complete (if applicable)

|                   |   |                                   |         |           |                |
|-------------------|---|-----------------------------------|---------|-----------|----------------|
| Name (Print/Type) | Mathew E. Corr  | Registration No. (Attorney/Agent) | 45,434  | Telephone | (414) 225-9755 |
| Signature         |  | Date                              | 9/17/03 |           |                |

**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain and retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

100029755 DOC A



BOYLE  
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INTELLECTUAL PROPERTY LAW

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September 17, 2003

Mail Stop PATENT APPLICATION  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Re: UTILITY PATENT APPLICATION TRANSMITTAL UNDER 37 C.F.R. § 1.53(b)  
Inventor(s): Jae Kwang Park and Min Jang  
Title: REMOVAL OF ARSENIC AND OTHER ANIONS USING NOVEL  
ADSORBENTS  
Priority: U.S. Provisional Appln. No. 60/411,610; Filed September 18, 2002  
Attorney Docket No.: 282.028

Dear Sir:

Enclosed please find a Utility Patent Application Transmittal, including: Fee Transmittal Form and our check in the amount of \$507.00; 24-page specification; 6 sheets of drawings; 2-page executed Declaration including Power of Attorney; and a return receipt postcard. Applicant is a small entity within the meaning of 37 CFR §§ 1.9 and 1.27 and hereby claims small entity status.

This application claims priority under 35 U.S.C. §119(e) to U.S. Provisional Patent Application No. 60/411,610, filed September 18, 2002.

Additionally, an Information Disclosure Statement (IDS) and Form PTO-1449 are included herewith for filing in this application.

Commissioner for Patents  
Page 2  
September 17, 2003

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, in conjunction with this or any future communication related to the above-identified patent application, to Deposit Account No. 50-1170.

Respectfully submitted,



Mathew E. Corr  
Registration No. 45,434

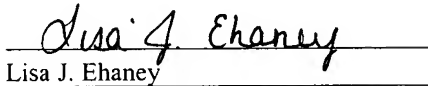
USPTO Customer No. 23,598

Certification Under 37 CFR 1.10

Express Mail Label No: EV313040001US

Date of Deposit: September 17, 2003

I hereby certify that this paper or fee is being deposited with the United States Postal Service in "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Box Patent Application, Director of the United States Patent and Trademark Office, Washington, D.C. 20231-9999.

  
Lisa J. Ehaney